AMENDMENTS

IN THE CLAIMS

1. (Previously Presented) A printing system comprising:

a pulse-jet printhead including a nozzle, a manometer and lines configured to individually connect said printhead and manometer to a fluid source or to connect said printhead and manometer to a fluid source supply exit line from said fluid source, said fluid source to be connected to a variable pressure compensation source, wherein said system is adapted to vary an output of said variable pressure compensation source to maintain a fluid level within said manometer in a predetermined range to maintain fluid pressure at said nozzle within a corresponding range.

2. (Previously Presented) The system of claim 1, further comprising said fluid source.

3. (Previously Presented) The system of claim 2, further comprising a sensor to generate a signal in response to the fluid level within said manometer, and a control unit which generates a control signal for said variable pressure compensation source in response to said sensor signal.

4. (Previously Presented) The system of claim 1, further comprising a variable pressure compensation source.

5. (Original) The system of claim 1, further comprising a first valve at an exit of said manometer.

6. – 7. (Cancelled, without prejudice.)

8. (Original) The system of claim 1, further comprising a print medium.

9. (Cancelled, without prejudice.)

10. (Currently Amended) A method of maintaining a desired pressure of a print medium at a pulse-jet nozzle comprising:

providing a system comprising a pressure gauge ~~manometer~~ and a nozzle and lines configured to connect ~~connected~~ said manometer and said nozzle to a fluid source ~~reservoir~~ individually or ~~connected~~ to a supply exit line from said fluid source ~~reservoir~~;

applying pressure to said fluid source ~~reservoir~~;

monitoring a fluid level in said pressure gauge ~~manometer~~; and

adjusting said pressure applied to said fluid source ~~reservoir~~ in response to changes in said pressure gauge ~~manometer level~~.

11. (Original) The method of claim 10, wherein said pressure applied is negative pressure.

12. (Original) The method of claim 10, wherein said pressure applied is positive pressure.

13. – 22. (Cancelled, without prejudice)

23. (Previously Presented) A method of replenishing a pulse-jet reservoir comprising:

providing a printing system comprising a pulse-jet printhead, a pressure gauge, a reservoir, and a fluid supply vessel, wherein said reservoir has an inlet line and an outlet line, said inlet line capped by a valve for connection to a fluid supply and said outlet line in fluid communication with said printhead, wherein said pressure gauge comprises a manometer, and wherein said fluid supply vessel is connected to said reservoir via a supply vessel line connected to said valve;

connecting said fluid supply vessel to said reservoir;

opening said valve, and

feeding print medium from said fluid supply vessel to said reservoir, wherein said print medium is fed under pressure to said reservoir during use of said pulse-jet nozzle, and wherein said print medium comprises a biopolymer or precursor thereof.

24. (Original) The method according to claim 23, wherein said method is a method of producing a biopolymer array.

25. (Original)A biopolymeric array produced according to the method of claim 24.

26. (Previously Presented) A method of detecting the presence of an analyte in a sample, said method comprising:

contacting (i) a biopolymeric array according to claim 25 having a polymeric ligand that specifically binds to said analyte, with (ii) a sample suspected of comprising said analyte under conditions sufficient for binding of said analyte to a biopolymeric ligand on said array to occur; and

detecting the presence of binding complexes on the surface of the said array to detect the presence of said analyte in said sample.

27. (Original) The method according to claim 26, wherein said method further comprises a data transmission step.

28. (Original) A method according to claim 27 wherein the data is communicated to a remote location.

29. (Original) A method comprising receiving data representing a result of a reading obtained by the method of claim 27.

30. (Previously Presented) A printing system comprising:

a pulse-jet printhead including a nozzle, a manometer and lines configured to individually connect said printhead and manometer to a fluid source or to connect said printhead and manometer to a fluid source supply exit line from said fluid source, said fluid source to be connected to a variable pressure compensation source,

wherein a first valve is provided at an exit of said manometer and a second valve is provided at an entrance to a fluid reservoir, and

wherein said system is adapted to vary an output of said variable pressure compensation source to maintain a fluid level within said manometer in a predetermined range to maintain fluid pressure at said nozzle within a corresponding range.

31. (Previously Presented) A printing system comprising:

a pulse-jet printhead including a nozzle, a manometer and lines configured to individually connect said printhead and manometer to a fluid source or to connect said printhead and manometer to a fluid source supply exit line from said fluid source, said fluid source to be connected to a variable pressure compensation source, wherein said system is adapted to vary an output of said variable pressure compensation source to maintain a fluid level within said manometer in a predetermined range to maintain fluid pressure at said nozzle within a corresponding range,

the system including a print medium comprising a biopolymer or precursor thereof.

32. (Previously Presented) A printing system comprising:

a pulse-jet printhead, a pressure gauge and a reservoir containing biopolymeric print medium and having an inlet line and an outlet line, said inlet line capped by a valve for connection to a fluid supply and said outlet line in fluid communication with said printhead.

33. (Original) The system of claim 32, wherein said pressure gauge comprises a manometer.

34. (Original) The system of claim 33, further comprising a fluid supply reservoir.

35. (Original) The system of claim 34, wherein said supply vessel is connected to said reservoir via a supply vessel line connected to said valve.

36. (Original) A method of replenishing a pulse-jet reservoir comprising:

providing a system as described in claim 34,

connecting said fluid supply vessel to said reservoir;

opening said valve, and

feeding print medium from said fluid supply vessel to said reservoir.

37. (Original) The method of claim 36, wherein said supply vessel is connected to said reservoir via a supply vessel line connected to said valve.

38. (Original) The method of claim 37, wherein said print medium is fed under pressure to said reservoir during use of said pulse-jet nozzle.

39. (Original) The method of claim 38, wherein gauge pressure is monitored and pressure compensation is applied to maintain said pressure within a desired range.

40. (Original) The method of claim 38, wherein said pressure gauge comprises a manometer.

41. (Previously Presented) A printing system comprising:

a pulse-jet printhead including a nozzle, a manometer and lines configured to connect said printhead and manometer at a common point to a fluid source to be connected to a variable pressure compensation source, wherein said system is adapted to vary an output of said variable pressure compensation source to maintain a fluid level within said manometer in a predetermined range to maintain fluid pressure at said nozzle within a corresponding range,

the system comprising said fluid source and a supply vessel to feed a print medium to said fluid source,

wherein a first valve is provided at an exit of said manometer and a second valve is provided at an entrance to a fluid reservoir, and

wherein the system is adapted for said feeding to occur during use of said pulse jet nozzle.

42. (Previously Presented) A method of maintaining a desired pressure of a print medium at a pulse-jet nozzle comprising:

providing a system comprising a manometer and lines configured to connect said nozzle and manometer at a common point to a fluid reservoir;

applying pressure to said fluid reservoir;

monitoring a fluid level in said manometer;

adjusting said pressure applied to said fluid reservoir in response to changes in said manometer level.,

attaching a fluid supply vessel to said fluid reservoir upon closing a first valve provided at an exit of said manometer and opening a second valve provided at an entrance to a fluid reservoir, and

feeding a print medium from said fluid supply vessel to said fluid reservoir.